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THE CLAIMS

Having thus described my invention, what I claim as new, useful and non-obvious and, accordingly, secure by Letters Patent of the United States is:

1. A blast protective barrier system definable in terms of an x,y,z coordinate system, comprising:

10 (a) a plurality of substantially ground level (xy plane) pile caps, each comprising an x-axis elongate length, a y-axis width, and a z-axis height, said x-axis length substantially defining the width of said system, each end cap further including upper and lower xy plane surfaces, each of said upper surfaces including y-axis channels and each of said lower surfaces including substantially z-axis recesses,
15 said pile caps substantially symmetrical about a xz plane;

(b) a plurality of opposing pairs of yz plane, y-axis elongate vertical concrete panels having an x-axis with, each panel pair having a lower y-axis edge proportioned for securement within said y-axis channels of said upper xy surfaces of said pile caps;

20 (c) high shock absorbent material disposed between each pair of said concrete panel; and

(d) a plurality of z-axis elongate piles, each having z-axis upper ends proportioned for press-fittable insertion into said substantially z-axis recesses of said lower xy plane surfaces of said pile caps.

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5 2. The system as recited in Claim 1, in which, within an xy plane cross-section of each said pile cap and panel, an x-axis pile cap dimension to separation between opposing panel surfaces defines a ratio in a range of about 2.5:1 to about 5:1.

 3. The system as recited in Claim 2, in which said ratio is preferably
10 about 3.5:1.

 4. The system as recited in Claim 1, in which, in a xz plane through each panel pair and of said volume of shock absorbent material, a total aggregate x-axis dimension of outer yz surfaces of said panel to said material comprises an x-axis
15 range of about 1.5:1 to about 2.5:1.

 5. The system as recited in Claim 4, in which, in a xz plane of each panel pair and said volume of shock absorbent material, a total aggregate x-axis dimension of outer yz surfaces of said panels to said compacted shock absorbent material
20 preferably comprises a ratio of about 2:1.

 6. The system as recited in Claim 1 in which each panel of said panel pairs are of like x-axis width.

25 7. The system as recited in Claim 6, in which a ratio of said x-axis volume of shock absorbent material to an x-axis dimension of each panel is in a range of about 3:1 to about 2:1.

5 8. The system as recited in Claim 7, in which an x-axis length of said
volume of shock absorbent material to an x-axis dimension of each of said panels
defines a ratio of about 2.3:1.

9. The system as recited in Claim 7, in which a z-axis depth of lower
10 ends of said panels within said y-axis channels of said pile caps to said entire z-axis
length thereof comprises a ratio in a range of about 0.05 to about 0.15.

10. The system as recited in Claim 9, in which a z-axis depth of lower
ends of said panels within said channels of said pile caps to said entire z-axis length
15 of each panel defines a ratio of about 0.07.

11. The system as recited in Claim 7, in which said piles define an in-
ground length in a range of about 10 to about 50 feet.

20 12. The system as recited in Claim 11, in which each pile cap defines an x-
axis length in a range of about 10 to about 20 feet.

13. The system as recited in Claim 12, in which each panel is reinforced
using vertical and horizontal rebars.

25 14. The system as recited in Claim 13, in which said horizontal rebars
project in a xy plane beyond concrete xz end surfaces of said panels.

15. The system as recited in Claim 14, further comprising:
30 panel joining z-axis elongate columns positioned between opposing xy
plane end faces of groups of panel pairs and pile caps, including concrete port, in a z-

5 axis direction, to envelope said projecting rebars of said respective pairs of said panels, thereby sealing opposing groups of panels at a desired angulation therebetween.

16. The system as recited in Claim 11, in which a ratio of pile cap x-axis
10 length to y-axis width comprises a range of between about 3.5:1 and about 2.2:1.

17. The system as recited in Claim 16, in which a ratio of x-axis ratio of said pile cap upper surface is about equal to a diameter of each pile receiving recess of said lower surfaces thereof.

15 18. The system as recited in Claim 15, in which a z-axis height of each panel is in a range of about 8 to about 15 feet.

19. The system as recited in Claim 15, in which a ratio of z-axis height of
20 each panel to a x-axis length of each pile cap comprises a range of between about 0.7:1 and about 1.2:1.

20. The system as recited in Claim 15, in which a ratio of z-axis height of each panel to a x-axis length of each pile cap is preferably about 0.9:1.

25 21. The system as recited in Claim 1, in which said recesses within said lower surfaces of pile caps comprise three recesses, each defining a different axis relative to a central xz plane of each pile cap, in which:

(a) one pile is co-linear with a z-axis center of said xz plane of
30 symmetry of each pile cap; and

5 (b) substantially z-axis left and right recesses within lower surfaces
of said end cap are equally offset from a central recess and define respective angles in
a range of about 10 to about 30 degree relative to said z-axis of said end cap along
said xz plane of symmetry thereof.

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